

Geometry Date_____ 2.5 Notes

Proving Statements about Segments (pp 102–103)

Examples

2. Complete the proof:

Given: $\overline{RT} \cong \overline{WY}$, $ST = WX$

Prove: $\overline{RS} \cong \overline{XY}$

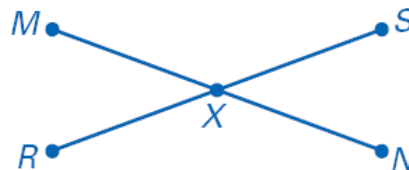


Statement	Reason
	Given
$RT = WY$	
$RT = RS + ST$ $WY = WX + XY$	Segment Addition Postulate
$RS + ST = WX + XY$	Substitution Property of equality
$ST = WX$	
$RS = XY$	
	Definition of congruent segments.

3. Given: X is the midpoint of \overline{MN} , and

$MX = RX$.

Prove: $XN = RX$



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Guided Practice.

4. Given: $RS = XY$, $ST = WX$

Prove: $RT = WY$



5. An example of the Symmetric Property of Segment Congruence is
“If $\overline{AB} \cong \underline{\hspace{1cm}}$, then $\overline{CD} \cong \underline{\hspace{1cm}}$.”

6. In the diagram,
 $\overline{CB} \cong \overline{SR}$, & $\overline{CB} \cong \overline{QR}$. Explain
what is wrong with
Michael's argument.

~~Because $\overline{CB} \cong \overline{SR}$ and $\overline{CB} \cong \overline{QR}$,
then $\overline{CB} \cong \overline{AC}$ by the Transitive
Property of Segment Congruence.~~



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